CLAIMS

What is claimed is:

1. Device for contacting and/or modifying a surface having a cantilever connected to an almost plane carrier element staying apart from said surface, said cantilever having a tip at its loose end being in close contact to said surface, wherein said cantilever stands out of the plane of said carrier element.

2. Device according to claim 1, wherein said cantilever is bent along its direction.

3. Device according to claim 1, wherein said cantilever is at least partially attached with additional material, said additional material having a thermal expansion coefficient c_1, which is different than the thermal expansion coefficient c_2 of the material of which said cantilever is made.

4. Device according to claim 3, wherein said additional material causes a defined stress moment acting onto said cantilever being bent through it out of the plane of said carrier element.

5. Device according to claim 3, wherein said cantilever provides a base section which is fixed to said carrier element, onto said base section said additional

material is attached and extending into areas of said cantilever not being supported by said carrier element

6. Device according to claim 3, wherein said cantilever is made of silicon and said additional material is of silicon nitride.

7. Device according to claim 3, wherein said additional material is attached directly onto said cantilever as a layer defined by thickness and length.

8. Device according to claim 1, wherein the cantilever is made of a material or a material composition providing an intrinsic stress make the cantilever bending out of said plane.

9. Device according to claim 8, wherein said intrinsic stress is provided by a thermal treatment of said cantilever.

10. Device according to claim 8, wherein said intrinsic stress is provided by implantation in the cantilever.

11. Device according to claim 1, wherein said tip is directed approximately perpendicular towards said cantilever and protruding the surface of said cantilever.

12. Device according to claim 1, wherein said tip is provided on a side of said cantilever being turned away from said surface and said cantilever being bent along its direction about approximately 180° so that said tip is in contact with said surface.

13. Device according to claim 1, wherein said tip and the direction of said cantilever enclose an angle between 0° and 90°.

14. Device according to claim 13, wherein said cantilever is bent along its direction about 90° maximally.

15. Device according claim 1, wherein said tip is of the same or different material as that of the cantilever.

16. Device according to claim 1, wherein said tip does not tower above the plane of said cantilever and is connected in one piece with said cantilever.

17. Device according to claim 1, wherein said surface is a storage media, like a thin polymer film, into which thermomechanical writing and thermal readout of binary information takes place by said tip.

18. Device according to claim 1, wherein said surface is a surface onto which lithographic and imaging techniques are applicable using said tip.

19. Device according to claim 1, wherein said surface is of a nature which is modifiable by said tip.